Medical Elective Report – Kathmandu, Nepal

When first deciding where to undertake the 8-week medical elective, I created a list of learning objectives that I aimed to achieve through the program. These included:

- Furthering my medical knowledge and understanding of body systems and medical disciplines
- Furthering my experience working in an Emergency Department including the medical pathways that occur depending on the presentation
- Gaining experience and confidence in performing procedural skills
- Improving my pharmacological knowledge including optimal choice of medication as well as drug interactions
- Experiencing medicine in a different part of the world
- Experiencing a different culture and understanding the impact that culture has within medicine
- Having the opportunity to travel and explore a new country

I next began researching various locations and opportunities around the world that would satisfy these goals, and eventually came across a medical student's report of their own elective in Kathmandu. The report detailed their elective experience which sounded like a fantastic opportunity and the student had achieved everything I hoped to get out of my own one. I reached out to that same hospital in Kathmandu and within a day had received a reply confirming that I could complete my 8-week elective at Tribhuvan University Teaching Hospital (TUTH) in the Emergency Department. With the elective confirmed, the remainder of 2022 became one of growing elation at the prospect of a Nepal adventure along with a copious amount of planning.

On January 6th, I found myself boarding a plane at Sydney Airport preparing to leave Australia and everything I knew behind for 9 weeks. I arrived in Kathmandu and settled into a homestay with a very welcoming Nepalese family. They taught me useful Nepali phrases whilst introducing me to delicious local meals. The Nepali that I learnt from them was vital throughout the entire Nepal trip, and using the language as much as possible was a rapid way to build rapport with patients and other people I met along the way. At the homestay were other medical students from Australia, including 4 others from The University of Sydney which allowed for group discussions regarding interesting cases. It was also rewarding to build these relationships with future colleagues from all around Australia.

On my first day at TUTH, I arrived in my best clinical attire and a white coat (which is a requirement of medical students in Nepal) ready to embrace the hospital environment and eager to learn. Upon stepping foot inside the Emergency Department of TUTH, I was met with a wave of chaos. This is a common situation in most emergency departments right around the world, but this one was particularly tumultuous. The department was packed full of patients and their families, with 3-4 patients per bed. It was divided into three areas: Green, Yellow, Red depending on the triage category of the patient. Green was for minor symptoms that could wait up to two hours before being seen and included minor lacerations or vomiting/diarrhoea without dehydration and various others. Yellow was for "imminently life threatening" patients and included cases such as acute exacerbations of COPD, GI bleeds, and infections. Red area was reserved for patients at immediate risk of loss of life or deterioration requiring immediate aggressive interventions and included any cardiorespiratory arrests, severe burns, trauma, and any GCS < 8. Each area had its own team which usually consisted of a consultant, 2-3 residents, 2 interns, and 3 medical students.

A typical patient journey in this Emergency Department involves arriving either by presenting themselves or being brought in by a family member or ambulance. Most ambulances in Nepal are a 4-wheel drive with enough equipment to provide basic life support to maintain a patient until they

can get to a hospital and cost approximately 1000-2000 Rs (~$10-$20 AUD). They are assessed by the triage Nurse and assigned to an area. Here, they are then assessed by one of the Doctors with a full history and examination conducted with all of this recorded on physical admission documents. Investigations are ordered with the patient or their family having to pay for the investigation prior to it being conducted. Interestingly, almost every single patient in the Emergency Department received an Arterial Blood Gas (ABG). This was quite different from Australia in which not every patient requires an ABG, however, it was how patients were managed in this department and the results guided a lot of the management decisions. This resulted in many opportunities to gain experience in performing ABG's, both from radial and brachial arteries.

Not only were there many opportunities to gain experience performing ABGs, but also many other procedures. Whilst I had already inserted many intravenous cannulas in Sydney during my Emergency Department placement, it felt like I was learning how to perform these all over again as the cannulas used in this hospital were very different from the ones I was used to, and required almost the entire needle to be inserted into the vein before the plastic tube could be slid off. I inserted many nasogastric tubes throughout this placement, and even here there was a significant difference between Nepal and Australia – following insertion, there was no x-ray to confirm the NG tube had been placed correctly. Instead, to ensure correct location, air was injected into the tube and if air entry was heard on auscultation, then it could be assumed to be correct. I was also able to practise wound cleaning and dressing, plaster casts, suturing, as well as one chest drain insertion. This extensive procedural skill practice satisfied one of the primary learning objectives I aimed to achieve on this placement and following this placement I have gained competence and confidence in performing these which will allow me to contribute successfully to future teams during my internship year.

Along with the experience gained from performing procedures, I was also able to further develop my understanding of the presentation and prognosis of common clinical pathologies. Being in Emergency Department meant that I was exposed to all body systems, from respiratory issues to genitourinary pathologies to haematological conditions. Nepal faces the challenge of being a very mountainous country with underdeveloped roads, making travel throughout the nation very difficult. Patients must also purchase all equipment for procedures and any medicine or fluids as well as pay for all investigations out of their own pocket. Both barriers contribute to the issue of patients presenting very late in the disease progression. I found this to be especially different from Sydney in which most patients are quick to seek help through primary care as soon as an issue develops, and GPs are skilled at managing these issues in the early stages. This meant that I was being exposed to signs and symptoms of diseases that I had only ever read about in textbooks or seen photos of in lectures which reinforced the importance of a thorough physical examination whilst also understanding the pathophysiology of the physical manifestations of an illness.

A typical day as a student in the department involved being assigned a team for the day (either green, yellow, or red) and then beginning rounds at 9am. Doing rounds was another major difference to what I had experienced in my last Emergency Department rotation which did not have them due to a rapid patient turnover. However, I was very grateful that these occurred as they provided endless opportunities for the consultant on the team to teach and share their knowledge regarding the case in front of us. This was especially important as most patients did not speak English and having a doctor translate the history and also teach in English helped to remove the language barrier that I faced. I was very grateful for all the valuable teachings that I received during the rounds and feel that following the elective, I now have a stronger understanding of how to approach various presentations to the Emergency Department as well as how to manage common cases. The commonest presentations included exacerbations of COPD, chronic liver disease, and infectious diseases such as TB and leprosy. I have gained a much stronger understanding of all of these diseases and the optimal management due to the high amount of cases that I saw.

There are significant contrasts between the training I have received through SMP and that I obtained on the elective. Various reasons have already been explored above, including the

difference in presentations as well as patients paying for everything. Throughout my years of placement, I have felt extremely well supported by both faculty as well as hospital staff at my allocated clinical school. All clinicians have been so willing to generously donate their time to teach and explain things, and as there was no language barrier, talking to patients about their conditions is very easy to do. In Nepal, the culture within medicine and medical students is vastly different. There was less support for medical students on the ward, and along with the language barrier this made it much more challenging than previous placements in Sydney. However, this also resulted in being forced to take initiative and be more proactive and independent to achieve learning from the placement. In a way, this will help to excel further as a medical student and as a future clinician.

Whilst being proactive and acting independently, it was vital to build professional relationships with Nepalese clinicians and medical students. The head of the department, Dr Ramesh Kumar Maharjan, was very happy to have discussions and invited us to a conference which was a fantastic experience. At the conference, we were exposed to research being conducted within Nepal to improve Emergency Departments from around the country, as well as hearing about public health measures that are being implemented. Along with all the Nepalese colleagues that we came to know very well, we also had the pleasure of learning about Bhutan's medical system through 4 Bhutanese Doctors that were placed in the department. There were also medical students from other Australian medical schools as well as some from the UK. This was the first time during my degree that I had been surrounded by medical professionals from all around the world, not just my own medical school, and it was a valuable opportunity to hear all off their stories and discover their own unique medical cultures and reflect on how it differed from my own.

Reflecting on the experience, I gained so much more than just medical knowledge and procedural skill practice. I entered Nepal with expectations of what it was going to be, and it turned out to be entirely different. I was privileged to have such intimate exposure to the Nepalese culture and can appreciate the values that the society has instilled. It was also important to reciprocate this by giving back to the community. I helped as much as possible in the Emergency Department with the hope of alleviating the pressure that the system is under. I have a newfound appreciation of the Australian healthcare system and am grateful for free healthcare we receive. I have gained a network of clinicians from Nepal, Australia, Bhutan and the UK and plan to stay in contact with a lot of these future colleagues. It was an experience that will stay with me for life, with the skills gained from it contributing towards my own success as a future clinician.

I would like to pass on an enormous amount of appreciation and gratitude towards the family and friends of Dr Carl Richard Jackson, who supported this elective experience through the Dr Carl Richard Jackson Scholarship. Without this support, the elective would not have been possible. I hope to continue the legacy behind this scholarship by using this career to give back to communities in need. Thank you.